

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: M. Hayama et al. : Art Unit:  
Serial No.: To Be Assigned : Examiner:  
Filed: Herewith :  
For: METHOD FOR FABRICATING A :  
MULTILAYER CERAMIC  
SUBSTRATE (AS AMENDED)

## DIVISIONAL OF:

Applicant: M. Hayama et al. : Art Unit: 2814  
Serial No.: 09/173,288 : Examiner: A. Chambliss  
Filed: October 14, 1998 : Attn: Issue Branch  
For: METHOD FOR FABRICATING A : Confirmation No.: 1587  
MULTILAYER CERAMIC :  
SUBSTRATE (AS AMENDED) :

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, DC 20231

SIR:

Prior to examination, please amend the above-identified application as follows:

IN THE TITLE:

Please replace the Title beginning at page 1, line 1 of the Specification:

METHOD FOR FABRICATING A MULTILAYER CERAMIC SUBSTRATE

IN THE SPECIFICATION:

Please insert the following section at page 1, line 5 of the Specification:

**CROSS-RELATED APPLICATIONS**

A1 This application is a Divisional application of U.S. Patent Application  
Serial No. 09/173,288, filed October 14, 1998.

IN THE DRAWINGS:

Please delete sheets "5/13", "6/13", and "7/13" and replace with the figures attached hereto.

IN THE CLAIMS:

Please cancel claims 1, 2, and 4-21.

Please replace claim 3 with the following amended claim:

1       3. (As Amended) A method for fabricating a multilayer ceramic substrate  
2 comprising the steps of:

3             (a) manufacturing an intaglio plate of flexible resin substance, on which a  
4 first groove corresponding to a first conductive pattern is formed and a second  
5 groove having a depth deeper than that of the first groove is formed at a place  
6 corresponding to a via of the first conductive pattern;

7             (b) filling the first and the second grooves with an electroconductive paste;

8             (c) increasing conductivity of respective paths in said first and second  
9 grooves by deaerating and drying the paste;

10           (d) adding additional electroconductive paste to said first and second  
11 grooves to replenish a decremented volume of said paste ;

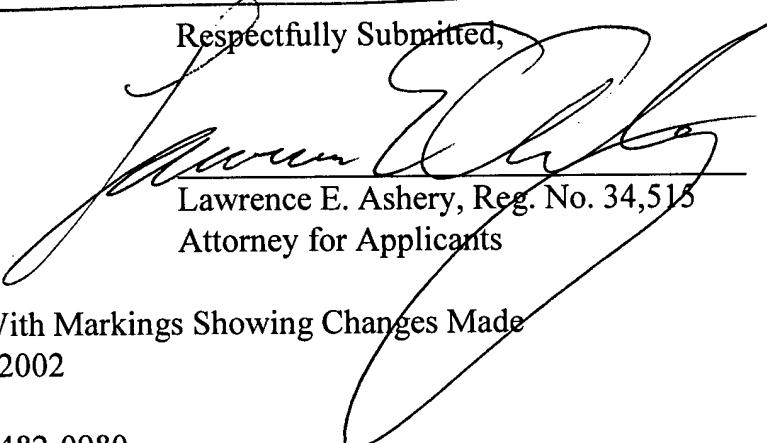
12                 (e) gluing said intaglio plate onto a ceramic substrate by applying heat and  
13                 pressure;

14                 (f) separating said intaglio plate from said ceramic substrate to have a  
15                 pattern of the electroconductive paste transferred onto the ceramic substrate, and  
16                 burning it so as to form said first conductive pattern on the ceramic substrate;

17                 (g) forming an insulation layer on said first conductive pattern, wherein said  
18                 insulation layer is formed by a printing technology covering the whole area of said  
19                 first conductive pattern and is dried, said via is exposed through abrasion or  
20                 grinding of the dried insulation layer and said insulation layer is burned after the  
21                 exposure of said via; *before burning said insulation layer*

22                 (h) forming a second conductive pattern on said insulation layer.

Respectfully Submitted,

  
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LEA/lm

Enclosure: Version With Markings Showing Changes Made

Dated: February 20, 2002

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The Assistant Commissioner for Patents is  
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Kathleen Libby